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21398 VACCINIA

=> HCV adj evelope

0 HCV ADJ EVELOPE

=> "HCV envelope protein"

184 "HCV ENVELOPE PROTEIN"

=> L1 and L3

6 L1 AND L3

=> D L4 IBIB ABS 1-6

ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2001:912918 CAPLUS 137:150837

DOCUMENT NUMBER: TITLE:

SOURCE:

Effect of downstream sequence on the cleavage of envelope protein 1 signal sequence in Hepatitis C

virus

AUTHOR(S):

CORPORATE SOURCE:

Zhu, Lixin; Kong, Yuying; Wang, Yuan; Li, Guangdi Institute of Biochemistry and Cell Biology, Shanghai Institute for Biological Sciences, Chinese Academy of

Sciences, Shanghai, 200031, Peop. Rep. China Shengwu Huaxue Yu Shengwu Wuli Xuebao (2001), 33(6),

682-686

CODEN: SHWPAU; ISSN: 0582-9879 Shanghai Kexue Jishu Chubanshe

PUBLISHER: DOCUMENT TYPE:

Journal

LANGUAGE:

Chinese

The RNA genome of hepatitis C virus encodes a polyprotein of about 3,000 amino acids, which is processed into 10 viral protein by proteases provided by host cells and virus itself, multiple precursors are produced due to inefficient processing. El signal sequence (C/El site) processing in eukaryotic vaccinia virus/T7 system was studied. Differently truncated HCV structural proteins were expressed in this system. found that the efficient cleavage of El signal sequence was affected by downstream envelope protein sequences. When the lacZ gene encoding a

product with similar size was engineered downstream to the El signal sequence, the inefficient cleavage of signal sequence was also observed, suggesting that the effect of downstream sequence on the cleavage was due to the presence of the envelope protein sequences. Computer-aided anal. clearly showed that El signal sequences was a typical signal sequence. The influence of downstream sequences to signal sequence cleavage demonstrated here was uncommon. To date, similar observations were only reported for the processing of IL-12 signal sequence and the C/prM site of flavivirus.

L4 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:117461 CAPLUS

DOCUMENT NUMBER: 130:324135

TITLE: New monoclonal antibodies against a recombinant second

envelope protein of hepatitis C virus

AUTHOR(S): Inudoh, Michiharu; Kato, Nobuyuki; Tanaka, Yuetsu CORPORATE SOURCE: Virology Division, National Cancer Center Research

Institute, Chuo-ku, Tokyo, 104-0045, Japan

SOURCE: Microbiology and Immunology (1998), 42(12), 875-877

CODEN: MIIMDV; ISSN: 0385-5600

PUBLISHER: Center for Academic Publications Japan

DOCUMENT TYPE: Journal LANGUAGE: English

AB To study the immunol. features of the hepatitis C virus (HCV) envelope protein (E2 protein), new specific monoclonal antibodies (mAbs) were generated. WKA/H rats were immunized with

syngeneic cells infected with a vaccinia virus expressing the E2 protein and with soluble E2 protein obtained from Chinese hamster ovary cells with a plasmid-based expression system. By screening hybridoma cells obtained from spleen cells of the immunized rats, three specific mAbs were obtained. One mAb was reactive to a peptide corresponding to the hypervariable region 1 (HVR1) in E2 protein, while the others reacted to regions outside HVR1. The significance of these antibodies for the diagnosis of HCV infection as well as for anal. of the structure of the HCV E2 protein will be discussed.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:4188 CAPLUS

DOCUMENT NUMBER: 120:4188

TITLE: Characterization of hepatitis C virus envelope

glycoprotein complexes expressed by recombinant

vaccinia viruses

AUTHOR(S): Ralston, Robert; Thudium, Kent; Berger, Kim; Kuo,

Carol; Gervase, Barbara; Hall, John; Selby, Mark; Kuo,

George; Houghton, Michael; Choo, Qui Lim CORPORATE SOURCE: Chiron Corp., Emeryville, CA, 94608, USA

SOURCE: Journal of Virology (1993), 67(11), 6753-61

CODEN: JOVIAM; ISSN: 0022-538X

DOCUMENT TYPE: Journal LANGUAGE: English

AB The authors constructed recombinant vaccinia virus vectors for expression of the structural region of hepatitis C virus (HCV). Infection of mammalian cells with a vector (vv/HCV1-906) encoding C-E1-E2-NS2 generated major protein species of 22 kDa (C), 33 to 35 kDa (E1), and 70 to 72 kDa (E2), as observed previously with other mammalian expression systems. The bulk of the E1 and E2 expressed by vv/HCV1-906 was integrated into endoplasmic reticulum membranes as core-glycosylated species, suggesting that these E1 and E2 species represent intracellular forms of the HCV envelope proteins. HCV E1 and E2 formed E1-E2 complexes which were precipitated by either anti-E1 or

anti-E2 serum and which sedimented at approx. 15 S on glycerol d. gradients. No evidence of intermol. disulfide bonding between E1 and E2 was detected. E1 and E2 were copurified to approx. 90% purity by mild detergent extraction, followed by chromatog. on Galanthus nivalus lectin-agarose and DEAE-Fractogel. Immunization of chimpanzees with purified E1-E2 generated high titers of anti-E1 and anti-E2 antibodies. Further studies demonstrated that purified E1-E2 complexes were recognized at high frequency by HCV+ human sera and generated protective immunity in chimpanzees, suggesting that these purified HCV envelope proteins display native HCV epitopes.

L4 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:528131 CAPLUS

DOCUMENT NUMBER: 117:128131

TITLE: Hepatitis C virus asialoglycoproteins manufacture for

vaccines or immunoassay

INVENTOR(S): Ralston, Robert O.; Marcus, Frank; Thudium, Kent B.;

Gervase, Barbara A.; Hall, John A.

PATENT ASSIGNEE(S): Chiron Corp., USA

SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: Facent English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

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JP 2005-35317
                   A3 20050210
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AB Two hepatitis C virus (HCV) envelope proteins
(E1 and E2) are manufactured without sialylation. Expression of these genes in lower eukaryotes, or in mammalian cells in which terminal glycosylation is blocked, results in proteins similar to native HCV glycoproteins. When isolated by mannose-binding GNA (Galanthus nivalus agglutinin) lectin affinity, the E1 and E2 proteins aggregate into virus-like particles. Cells bearing a mannose receptor or asialoglycoprotein receptor are capable of being infected with HCV and of supporting culturing of the virus. E1 and E2 were produced in HeLa S3 cells inoculated with recombinant Vaccinia virus containing HCV gene fragments and purified using a GNA-agarose column.

L4 ANSWER 5 OF 6 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1999:49108 BIOSIS DOCUMENT NUMBER: PREV199900049108

TITLE: New monoclonal antibodies against a recombinant second

envelope protein of hepatitis C virus.

AUTHOR(S): Inudoh, Michiharu; Kato, Nobuyuki; Tanaka, Yuetsu [Reprint

author]

CORPORATE SOURCE: Dep. Biosci., Sch. Sci., Kitasato Univ., Kitasato 1-15-1,

Sagamihara, Kanagawa 228-8555, Japan

SOURCE: Microbiology and Immunology, (1998) Vol. 42, No. 12, pp.

875-877. print.

CODEN: MIIMDV. ISSN: 0385-5600.

DOCUMENT TYPE: Article LANGUAGE: English

ENTRY DATE: Entered STN: 10 Feb 1999

Last Updated on STN: 10 Feb 1999

AB To study the immunological features of the hepatitis C virus (HCV

) envelope protein (E2 protein), new specific monoclonal antibodies (mAbs) were generated. WKA/H rats were immunized with syngeneic cells infected with a vaccinia virus expressing the E2 protein and with soluble E2 protein obtained from Chinese hamster ovary cells with a plasmid-based expression system. By screening hybridoma cells obtained from spleen cells of the immunized rats, three specific mAbs were obtained. One mAb was reactive to a peptide corresponding to the hypervariable region 1 (HVR1) in E2 protein, while the others reacted to regions outside HVR1. The significance of these antibodies for the diagnosis of HCV infection as well as for analysis of the structure of the HCV E2 protein will be discussed.

L4 ANSWER 6 OF 6 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER:

1993:585942 BIOSIS

DOCUMENT NUMBER:

PREV199497005312

TITLE:

Characterization of hepatitis C virus envelope glycoprotein

complexes expressed by recombinant vaccinia

AUTHOR(S):

Ralston, Robert; Thudium, Kent; Berger, Kim; Kuo, Carol; Gervase, Barbara; Hall, John; Selby, Mark; Kuo, George;

Houghton, Michael [Reprint author]; Choo, Qui-Lim

CORPORATE SOURCE:

Chiron Corporation, 4560 Horton St., Emeryville, CA 94608,

USA

SOURCE:

Journal of Virology, (1993) Vol. 67, No. 11, pp. 6753-6761.

CODEN: JOVIAM. ISSN: 0022-538X.

DOCUMENT TYPE:

Article English

LANGUAGE: ENTRY DATE:

Entered STN: 28 Dec 1993

Last Updated on STN: 28 Dec 1993

We constructed recombinant vaccinia virus vectors for expression of the structural region of hepatitis C virus (HCV). Infection of mammalian cells with a vector (vv/HCV-1-906) encoding C-E1-E2-NS2 generated major protein species of 22 kDa (C), 33 to 35 kDa (E1), and 70 to 72 kDa (E2), as observed previously with other mammalian expression systems. The bulk of the E1 and E2 expressed by vv/HCV-1-906 was found integrated into endoplasmic reticulum membranes as core-glycosylated species, suggesting that these E1 and E2 species represent intracellular forms of the HCV envelope proteins. HCV E1 and E2 formed E1-E2 complexes which were precipitated by either anti-E1 or anti-E2 serum and which sedimented at approximately 15 S on glycerol density gradients. No-evidence of intermolecular disulfide bonding between El and E2 was detected. El and E2 were copurified to approximately 90% purity by mild detergent extraction followed by chromatography on Galanthus nivalus lectin-agarose and DEAE-Fractogel. Immunization of chimpanzees with purified E1-E2 generated high titers of anti-E1 and anti-E2 antibodies. Further studies, to be reported separately, demonstrated that purified E1-E2 complexes were recognized at high frequency by HCV+ human sera (D. Y. Chien, Q.-L. Choo, R. Ralston, R. Spaete, M. Tong, M. Houghton, and G. Kuo, Lancet, in press) and generated protective immunity in chimpanzees, - (Q.-L. Choo, G. Kuo, R. Ralston, A. Weiner, D. Chien, G. Van Nest, J. Han, K. Berger, K. Thudium, J. Kansopon, J. McFarland, A. Tabrizi, K. Ching, B. Mass, L. B. Cummins, E. Muchmore, and M. Houghton, submitted for publication), suggesting that these purified HCV envelope proteins display native HCV epitopes.